REMARKS

1. The specification has been amended to conform to the substitute informal drawing submitted on even date, wherein divisional Fig. 6 has been split into two figures, Fig. 6A and Fig. 6B.

2. The Examiner objects to the drawings under 37 C.F.R. § 1.83 (a), asserting that the drawings do not illustrate the claimed features of the "switching means," "the supply voltage," and the "termination network." The Applicant respectfully disagrees with this assessment of the drawings.

The term "switching means" has been changed pursuant to this Amendment to "control means," since this term is consistent with the language used in the specification. The control circuit utilized in the present invention is depicted in FIG. 8 and discussed in detail on page 14 of the specification, lines 9 through 27.

The "supply voltage" Vcc (Vdd) is clearly marked in FIG. 8, as is the ground connection to the circuit. Although the objection to the term "one-half the supply voltage" is raised by the Examiner in conjunction with his objections to the claims under 35 U.S.C. § 112, first paragraph, the Applicant wishes to note that Vmid, clearly shown in FIG. 8, is set at one-half the supply voltage, as set forth in the specification on page 13, lines 12 through 14.

The Examiner also objects to the "termination network" of claim 11, asserting that this feature is not illustrated in the drawing figures. On the contrary, the Applicant respectfully submits that the termination resistors that comprise the termination network referred to in the claims are shown in FIG. 5 as resistors r1, r2, r3, and r4, and again in FIG. 6B as r9, r10, r11, and r12.

3. The Examiner also raises a number of objections to the claims under 35 U.S.C. § 112, first paragraph. Under §112, first paragraph, he believes that claims 6, 8, 9, and 18 contain subject matter not adequately described. In particular, he is referring to the concept that the driver circuit limits the output voltage to "about one-half of the supply voltage." As noted

above, a voltage denominated Vmid is constrained to be one-half of the supply voltage, and that is why the output voltage of the driver is about one-half of the supply.

4. The Examiner also believes that claims 1 through 20 are indefinite under 35 U.S.C. § 112 second paragraph, and provides a claim-by-claim analysis that is summarized below, along with Applicant's responses:

Claim 1 – As alluded to in part above, the Examiner seems to think that all of the claim limitations are indefinite because he can't fathom how the first driving means is connected to the second driving means and what is meant by the switching means that switches between the two. The Applicant is requested to point out the "switching means in the drawings." As noted above, the claim language has been modified, pursuant to this Amendment, to change "switching means" to "control means." Of course, since the limitations of claim 1 are set forth in means-plus-function form, there is no need for recitations of particular structure here.

Claim 3 – The Examiner does not approve of the language of the claim, in which the switching means is described as inputs that enable and disable the drivers. In his view, the switching means must comprise a circuit, and to the extent that the switching means enables and disables the drivers it must do so through the outputs of the switching means. The language of claim 3 has been modified, pursuant to this Amendment, and the Applicant respectfully submits that claim 3 now avoids the Examiner's objections.

Claim 6 – The Examiner objects to the phrase "terminating elements coupled to an output voltage of the driver circuit." The Examiner thinks that in FIG. 6 in particular, the terminating elements shown are only terminals wherein the inputs and outputs are connected. He insists that the terminals be coupled to a circuit instead of coupled to the output voltage. He believes that a similar analysis applies to claim 8.

As noted above, the "terminating elements" are resistors that are clearly illustrated in the drawings and discussed in the specification. They are not simply "terminals" as the Examiner asserts, and can therefore be coupled to an output voltage if desired.

Claim 8 – The Examiner once again maintains that the "switching means" claimed is indefinite because he believes it is unclear where the switching means appears in the drawings. He concentrates on FIG. 5 and asserts that he cannot find many of the claim terms. As noted

above, FIG. 8 (not FIG. 5) and the associated descriptive text provides an adequate treatment of this subject area.

Claims 9 and 10 – The Examiner once again maintains that the "mid-point termination voltage" is indefinite and the "supply voltage" as claimed does not exist. As explained in detail above, these terms and their meanings are adequately described in the specification.

Claim 11 – Similar to the comments directed to claims 6 and 8.

Claims 17 and 18 – The Examiner objects to the claim expression "wherein the second configuration of the line driver circuit corresponding to current source drive mode comprises driving the first pair of terminals of the termination network with the current source while the voltage source maintains the second pair of terminals of the termination network at a predetermined, non-zero potential." The Examiner believes that the current source driver and the voltage source driver are turned OFF and ON one at a time. Based upon this reasoning, the Examiner goes on to say that if the voltage source driver is turned off, it cannot then act to maintain the second pair of terminals of the termination network at a predetermined non-zero potential. As noted above, the control circuit that responds to the Enable input signal, as depicted in FIG. 8 and described in the specification, works exactly as claimed. If the Examiner requires further explanation, he is invited to arrange for a tutorial via telephone conference.

For the reasons set forth above, the Application respectfully submits that claims 1 through 21 avoid the Examiner's objections under 35 U.S.C. § 112, and therefore should be allowed.

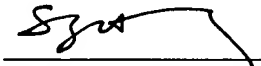
5. The Examiner has rejected claims 1-3, 4, 7, and 21 under 35 U.S.C. § 102 as anticipated by U.S. Patent No. 3,843,834 issued to Burke. The Burke reference, as the title suggests, is directed toward a line driver/line receiver circuit that couples a "utilization device", such as a computer, to a balanced line. The assumption here is that the computer is a single-ended device. In a first mode of operation, the line driver/receiver circuit receives a signal from the balanced line and couples it to the computer over a single-ended, receive data line. In the second mode of operation, the line driver/receiver takes a transmit data signal from the computer over a separate single-ended transmit data line and couples it to the same balanced line.

Despite the Examiner's efforts to make Burke appear to anticipate the claimed invention, the comparison is really strained. Burke's system does not provide separately enabled current source drive and voltage source drive for the same pair of lines, as does the system of the present invention. When Burke's transceiver drives the balanced line, output transistors 61 and 62 act as current sinks, but this is the only mode of operation the device has for driving the line. At that, the technique described by Burke is well-known in the art, and is acknowledged in the Background section of this application. The technique employed in the present invention is much more sophisticated than Mr. Burke's system.

The Applicant respectfully submits that neither the Burke reference, nor the other references noted by the Examiner, teach or suggest the Applicant's invention, either alone or in combination. Consequently, claims 1 through 21 are in condition for allowance and should be passed to issuance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to deposit account No. 23/2825.

Respectfully submitted,



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